1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND THE COMPANY/UNDERTAKING

1.1 Product identifier

Product code  4980546FIX

Product name  READYMATIC Fixer and Replenisher
               KODAK READYMATIC Dental Fixer and Replenisher

Pure substance/mixture  Mixture

1.2 Relevant identified uses of the substance or mixture and uses advised against

Identified uses:  Restricted to professional users. Photographic chemical.

Uses advised against  No information available

1.3 Details of the supplier of the safety data sheet

Supplier  Carestream Health Australia Pty Ltd., 27 Church Street, Richmond, Victoria, 3121

For further information, please contact:

E-mail address  For environment, health and safety information, email: WW-EHS@carestreamhealth.com

1.4 Emergency telephone number

+(61)-290372994

2.1 Classification of the substance or mixture

<table>
<thead>
<tr>
<th></th>
<th>Category 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Skin corrosion/irritation</td>
<td>Category 2</td>
</tr>
<tr>
<td>Serious eye damage/eye irritation</td>
<td>Category 2B</td>
</tr>
</tbody>
</table>

2.2 Label Elements

WARNING

Hazard statements
H315 - Causes skin irritation
H320 - Causes eye irritation

Precautionary statements
P264 - Wash face, hands and any exposed skin thoroughly after handling
P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
P337 + P313 - If eye irritation persists: Get medical advice/attention
P302 + P352 - IF ON SKIN: Wash with plenty of soap and water
P332 + P313 - If skin irritation occurs: Get medical advice/attention

2.3 OTHER INFORMATION

Properties Affecting Health: May cause respiratory tract irritation. May be harmful if swallowed.

Environmental properties: None known.

3. COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substances
Not applicable

3.2 Mixtures

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>CAS-No</th>
<th>Weight percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ammonium thiosulfate</td>
<td>7783-18-8</td>
<td>10-15</td>
</tr>
<tr>
<td>Acetic acid</td>
<td>64-19-7</td>
<td>1-5</td>
</tr>
<tr>
<td>Ammonium sulfite</td>
<td>10196-04-0</td>
<td>0.1-1</td>
</tr>
<tr>
<td>Sodium sulfite</td>
<td>7757-83-7</td>
<td>0.1-1</td>
</tr>
<tr>
<td>Sodium borate</td>
<td>1330-43-4</td>
<td>0.1-1</td>
</tr>
</tbody>
</table>

Non-hazardous ingredients

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>CAS-No</th>
<th>Weight percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Water</td>
<td>7732-18-5</td>
<td>80-90</td>
</tr>
</tbody>
</table>

4. FIRST AID MEASURES

4.1 Description of first aid measures

Eye contact: Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Get medical attention immediately if symptoms occur.

Skin contact: Wash off immediately with plenty of water for at least 15 minutes. Remove and wash contaminated clothing before re-use. Get medical attention immediately if symptoms occur.

Ingestion: Do NOT induce vomiting. Clean mouth with water and afterwards drink plenty of water. Never give anything by mouth to an unconscious person. Consult a physician if necessary.

Inhalation: Move to fresh air. Get medical attention immediately if symptoms occur.

4.2 Most important symptoms and effects, both acute and delayed

Main symptoms: Irritation.

4.3 Indication of any immediate medical attention and special treatment needed

Notes to physician: Treat symptomatically.

5. FIRE-FIGHTING MEASURES
5.1 Extinguishing media.

Suitable extinguishing media
Carbon dioxide (CO₂). Dry chemical. Foam.

Extinguishing media which shall not be used for safety reasons
No information available.

5.2 Special hazards arising from the substance or mixture.

Special hazard
Dried product residue can act as a reducing agent. Reacts violently with oxidizing materials. May cause spontaneous heating and ignition when absorbed on combustible, porous material (e.g. rags, paper, sawdust, cotton, clothing).

5.3 Advice for fire-fighters.

Special protective equipment for fire-fighters
As in any fire, wear self-contained breathing apparatus and full protective gear.

<table>
<thead>
<tr>
<th>Component</th>
<th>Hazchem Code</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acetic acid</td>
<td>2P</td>
</tr>
<tr>
<td>64-19-7 (1-5)</td>
<td>2R 2X</td>
</tr>
<tr>
<td></td>
<td>3W</td>
</tr>
<tr>
<td></td>
<td>3WE</td>
</tr>
<tr>
<td>Sodium borate</td>
<td>2X</td>
</tr>
<tr>
<td>1330-43-4 (0.1-1)</td>
<td>3W</td>
</tr>
<tr>
<td></td>
<td>3WE</td>
</tr>
</tbody>
</table>

6. ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures

For personal protection see section 8. Ensure adequate ventilation.

See Section 12 for additional information.

6.2 Environmental precautions.

Do not allow material to contaminate ground water system. Local authorities should be advised if significant spillages cannot be contained. Try to prevent the material from entering drains or water courses.

6.3 Methods and material for containment and cleaning up

Prevent further leakage or spillage if safe to do so.

Dam up. Contain and collect spillage with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local/national regulations (see Section 13).

7. HANDLING AND STORAGE

7.1 Precautions for safe handling

Avoid contact with skin, eyes and clothing. Avoid breathing vapours or mists. Ensure adequate ventilation. Wash thoroughly after handling.

7.2 Conditions for safe storage, including any incompatibilities

Keep container tightly closed in a dry and well-ventilated place.

7.3 Specific end uses
Specific use(s)  
Photographic chemical.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control parameters

Exposure limits

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>Australia</th>
<th>ACGIH TLV</th>
<th>The United Kingdom</th>
<th>Germany</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acetic acid</td>
<td>STEL 15 ppm</td>
<td>STEL 15 ppm</td>
<td>-</td>
<td>AGW 10 ppm</td>
</tr>
<tr>
<td></td>
<td>STEL 37 mg/m³</td>
<td>TWA: 10 ppm</td>
<td>-</td>
<td>AGW 25 mg/m³</td>
</tr>
<tr>
<td></td>
<td>TWA 10 ppm</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>STEL 25 mg/m³</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sodium borate</td>
<td>TWA 1 mg/m³</td>
<td>STEL 6 mg/m³</td>
<td>STEL 3 mg/m³</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>TWA: 2 mg/m³</td>
<td>TWA 1 mg/m³</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Biological standards  
No information available

8.2 Exposure controls

Engineering measures
Ensure adequate ventilation. Apply technical measures to comply with the occupational exposure limits.

Personal protective equipment

Eye protection  
Safety glasses with side-shields. If splashes are likely to occur, wear: Goggles.

Hand protection  
Impervious gloves. Please observe the instructions regarding permeability and breakthrough time which are provided by the supplier of the gloves. Also take into consideration the specific local conditions under which the product is used, such as the danger of cuts, abrasion.

Skin and body protection  
Wear suitable protective clothing. Impervious clothing.

Respiratory protection  
None under normal use conditions. If exposure limits are exceeded or irritation is experienced, NIOSH/MSHA approved respiratory protection should be worn. Respiratory protection must be provided in accordance with current local regulations.

Other Protective Equipment
Ensure that eyewash stations and safety showers are close to the workstation location.

Hygiene measures
Handle in accordance with good industrial hygiene and safety practice. Do not eat, drink or smoke when using this product. Remove and wash contaminated clothing before re-use.

Environmental exposure controls
No information available.

9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Values</th>
<th>Note - Method</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical state</td>
<td>Liquid</td>
<td></td>
</tr>
<tr>
<td>Colour</td>
<td>light yellow</td>
<td></td>
</tr>
<tr>
<td>Odour</td>
<td>Ammonia</td>
<td>No information available</td>
</tr>
<tr>
<td>Odour Threshold</td>
<td></td>
<td></td>
</tr>
<tr>
<td>pH</td>
<td>4.4</td>
<td>No information available</td>
</tr>
<tr>
<td>Melting point/range:</td>
<td></td>
<td>No information available</td>
</tr>
<tr>
<td>Freezing point:</td>
<td></td>
<td>No information available</td>
</tr>
<tr>
<td>Boiling point/boiling range</td>
<td>&gt; 100 °C</td>
<td>No information available</td>
</tr>
<tr>
<td>Flash Point</td>
<td>&gt; 93.600 °C</td>
<td>No information available</td>
</tr>
<tr>
<td>Evaporation rate</td>
<td></td>
<td>No information available</td>
</tr>
<tr>
<td>Flammability (solid, gas)</td>
<td></td>
<td>No information available</td>
</tr>
</tbody>
</table>
Explosive properties
No information available

Oxidizing properties
No information available

9.2 OTHER INFORMATION

Softening point
No information available

Molecular Weight
No information available

Density
No information available

Bulk Density
No information available

10. STABILITY AND REACTIVITY

10.1 Reactivity
No dangerous reaction known under conditions of normal use.

10.2 Chemical stability
Stable under normal conditions.

10.3 Possibility of hazardous reactions
None under normal processing. Contact with strong acids liberates sulphur dioxide. Contact with sodium hypochlorite (bleach) may form chloramine (toxic gas). Contact with strong bases liberates ammonia.

10.4 Conditions to avoid
Do not freeze. Extreme pH's.

10.5 Incompatible materials
Acids. Strong bases. Oxidizing agents. Halogenated compounds. Contact with strong acids liberates sulphur dioxide. Contact with strong bases liberates ammonia. Contact with sodium hypochlorite (bleach) may form chloramine (toxic gas).

10.6 Hazardous decomposition products

11. TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects
Acute toxicity
Product Information

Inhalation
Some asthmatics or sulfite-sensitive individuals may experience wheezing, chest tightness, stomach upset, hives, faintness, weakness and diarrhea. May cause irritation of respiratory tract. May be harmful if inhaled.

Eye contact
May cause eye irritation.
Skin contact  
May cause irritation.

Ingestion  
May be harmful if swallowed. Some asthmatics or sulfite-sensitive individuals may experience wheezing, chest tightness, stomach upset, hives, faintness, weakness and diarrhea.

Acute toxicity - Component Information

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>LD50 Oral</th>
<th>LD50 Dermal</th>
<th>LC50 Inhalation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Water</td>
<td>90,000 mg/kg (Rat)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ammonium thiosulfate</td>
<td>&gt; 2000 mg/kg (Rat)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Acetic acid</td>
<td>3310 mg/kg (Rat)</td>
<td>1060 mg/kg (Rabbit)</td>
<td>11.4 mg/L (Rat) 4 h</td>
</tr>
<tr>
<td>Ammonium sulfite</td>
<td>2500 mg/kg (Rat)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sodium sulfite</td>
<td>820 mg/kg (Rat)</td>
<td></td>
<td>22 mg/L (Rat) 1 h 5.5 mg/L (Rat) 4 h</td>
</tr>
<tr>
<td>Sodium borate</td>
<td>2403 mg/kg (Rat)</td>
<td>2000 mg/kg (Rabbit)</td>
<td></td>
</tr>
</tbody>
</table>

Other applicable information

Acetic acid  
Severe eye irritation  
Severe skin irritation  
Acute overexposure to extremely high airborne concentrations of respiratory irritants has been associated with development of an asthma-like reactive airways syndrome (RADS) in susceptible individuals. Extremely high airborne concentrations are not generated during normal conditions of use but may occur following a spill. The potential to generate extremely high airborne concentrations in a spill situation depends upon physical factors such as the concentration of the solution, the volume of the spill, the surface area of the spill, the size of the room where the spill occurred, and the ventilation rate in the room.

Sodium sulfite  
No skin irritation  
Mild eye irritation

Sodium borate  
Based on repeated-dose ingestion studies in animals, may cause adverse reproductive and developmental effects. However, the doses administered were many times those to which humans would normally be exposed.

Chronic toxicity

Carcinogenicity  
Contains no ingredient listed as a carcinogen.

Sensitisation  
No information available.

Reproductive toxicity  
Contains a known or suspected reproductive toxin. However, based on available data the product should not be classified for reproductive effects.

Target Organ Effects  

12.1 Toxicity

Ecotoxicity effects  
The environmental impact of this product has not been fully investigated.

Product Information  
No information available.

Component Information

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>Toxicity to algae</th>
<th>Toxicity to fish</th>
<th>Toxicity to daphnia and other aquatic invertebrates</th>
</tr>
</thead>
</table>
### Chronic aquatic toxicity

**Product Information**
No information available.

**Component Information**
No information available.

### 12.2 Persistence and degradability

Expected to be readily biodegradable.

### 12.3 Bioaccumulative potential

**Bioaccumulative potential**
No information available.

**Partition coefficient: n-octanol/water**
No information available

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>log Pow</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acetic acid</td>
<td>-0.31</td>
</tr>
<tr>
<td>Sodium sulfite</td>
<td>-4</td>
</tr>
</tbody>
</table>

### 12.4 Mobility in soil

No information available.

### 12.5 Results of PBT and vPvB assessment

No information available.

### 12.6 Other adverse effects

No information available

### 13. DISPOSAL CONSIDERATIONS

#### 13.1 Waste treatment methods

**Waste from residues / unused products**
Dispose of in accordance with local regulations.

**Contaminated packaging**
Do not re-use empty containers. Dispose of in accordance with local regulations.

**Advice on safe handling**
See Section 8 for more detail

### 14. TRANSPORT INFORMATION
The information given below is provided to assist in documentation. It may supplement the information on the package. The package in your possession may have a different version of the label depending on the date of manufacture. Depending on inner packaging quantities and packaging instructions, it may be subject to specific regulatory exceptions. Please consult the product packaging for further details.

ADG Component
Not classified as a dangerous goods.

Hazchem Code
Acetic acid
2P
2R 2X
3W
3WE

Sodium borate
2X
3W
3WE

ICAO/IATA
not regulated

IMDG/IMO
not regulated

For transportation information, go to: http://ship.carestreamhealth.com.

15. REGULATORY INFORMATION

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

International Inventories

<table>
<thead>
<tr>
<th>EINECS/ELINCS</th>
<th>Complies</th>
</tr>
</thead>
<tbody>
<tr>
<td>TSCA</td>
<td>Complies</td>
</tr>
<tr>
<td>DSL/NDSL</td>
<td>Complies</td>
</tr>
<tr>
<td>ENCS</td>
<td>Complies</td>
</tr>
<tr>
<td>IECSC</td>
<td>Complies</td>
</tr>
<tr>
<td>KECL</td>
<td>Complies</td>
</tr>
<tr>
<td>PICCS</td>
<td>Complies</td>
</tr>
<tr>
<td>AICS</td>
<td>Complies</td>
</tr>
<tr>
<td>NZIoC</td>
<td>Complies</td>
</tr>
</tbody>
</table>

Legend
EINECS/ELINCS - European Inventory of Existing Commercial Chemical Substances/EU List of Notified Chemical Substances
TSCA - United States Toxic Substances Control Act Section 8(b) Inventory
DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List
ENCS - Japan Existing and New Chemical Substances
IECSC - China Inventory of Existing Chemical Substances
KECL - Korean Existing and Evaluated Chemical Substances
PICCS - Philippines Inventory of Chemicals and Chemical Substances
AICS - Australian Inventory of Chemical Substances
NZIoC - New Zealand Inventory of Chemicals

National regulatory information

Australia

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>Australia - Standard for the Uniform Scheduling of Drugs and Poisons - Schedule 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acetic acid - 64-19-7</td>
<td>1, 4, 8 (in concentrations of &gt;=80% except when in Schedule 2)</td>
</tr>
<tr>
<td></td>
<td>2 (in concentrations of &gt;=80% except when in Schedule 2)</td>
</tr>
<tr>
<td></td>
<td>A, G3, E2, S1</td>
</tr>
<tr>
<td></td>
<td>Schedule 5</td>
</tr>
<tr>
<td></td>
<td>Schedule 2</td>
</tr>
<tr>
<td></td>
<td>Schedule 6</td>
</tr>
</tbody>
</table>

Component

<table>
<thead>
<tr>
<th>Australia - National Pollutant Inventory (NPI) Substance List</th>
</tr>
</thead>
</table>
Acetic acid
64-19-7 (1-5)

10 20
60000
1
25
400
2000

16. OTHER INFORMATION

Revision Date 2013-09-16
Revision Note (M)SDS sections updated

Disclaimer
The information provided on this SDS is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guide for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered as a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other material or in any process, unless specified in the text.